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29 September 1967

MEMORANDIJM FOR: Chairman, Interagency Intelligence
Advisory Group on Exchanges

SUBJECT

Supplemental OER Proposals for the US Draft to the US-USSR Exchanges Agreement for 1968-1969

REFERENCE

- : a. OER Memorandum to Chairman, Interagency Advisory Group on Exchanges, 27 September 1967
  - b. Exchanges Agreement for 1966-1967, 19 March 1966, Section III, pp 3-4
- 1. Following are two supplemental proposals from an OER Branch for inclusion in the US Draft of the 1968-1969 Exchanges Agreement:

# Minerals and Metals Branchi

a. Renew Metallurgy Exchange -- item (12) in reference b. (priority 3)

An exchange of this type offers, in theory, considerable potential insofar as information of intelligence value is concerned, but, in practice, Soviet unwillingness to include certain key installations on the itinerary in the USSR has resulted in watered-down proposals of only marginal intelligence value. Most of the Soviet plants which the USSR has been willing to include in the itinerary have already been visited by qualified Western observers and, in addition, the Soviets publish considerable information on such plants and on ferrous metallurgy in general.

b. Aluminum Industry Exchange -- New Proposal (priority 1)

Production of aluminum and its alloys, mechanization and automation of the electrolysis process, mining and processing of aluminous ores (bauxite, nepheline, and alumite) and manufacture of alumina.

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An exchange on aluminum could yield a net gain to the US

From the intelligence standpoint, the current alumina supply problem in the USSR is of particular interest because of its relevance for our estimates of future growth of the Soviet aluminum industry. Recently, the USSR has increased imports of bauxite and alumina because of the lag in its plans to obtain alumina from new non-bauxite raw materials, principally nepheline and alumite ores. Visits to appropriate facilities in the USSR could yield information about the current level of output at the two major alumina plants in the Urals (processing bauxite) and about prospects for the expansion of output at these established plants, as well as at new plants in Kasakhstan (processing bauxite). Armenia (processing alumite ores), and in Siberia (processing nepheline ores).

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From the standpoint of the Soviets, they probably would be interested in organizational and operating measures employed by US companies for improvements in efficiency from the mining through the metal production stages, but they might have an even greater interest in US fabricating technology. The Soviets have devoted considerable

attention to aluminum technology insufar as strategic applications (military and aerospace) are concerned, but have lagged in the development of capabilities for civilian applications. This also reflects the relatively weak effort compared to that in the US to promote new uses for aluminum, including those in construction, transport, packaging, and machine building.

## Proposed itineraries:

In the USSR -- Aluminous raw material mining -- Sevoural'sk, Sverdlovsk Oblast (bauxite). Zaglik, Azerbaijan SSR (alunite), and Uzhur, Krasnoyarsk Kray (nepheline). Alumina plants -- Krasnotur'insk, Urals region (largest Soviet producer of alumina processing bauxite), Kirovabad, Azerbaijan SSR (new plant designed to process alunite but has encountered technical problems), Achinsk, Krasnoyarsk Kray (scheduled to be largest alumina producer in the USSR when completed but technical difficulties have delayed operations for four years at this plant which is to process nepheline eres. Possible alternative is the Pikalevo plant (also processing nephelines), Pavlodar, Kazakh SSR (new plant processing bauxite). Reduction plants -- Bogoslovskiy, Volgograd, Bratsk, Krasnoyarsk, Kanaker, and Nadvoitsy. Institutes -- All-Union Aluminum-Magnesium Institute.

In the US --Appropriate facilities of US companies, depending on their interest in participating in exchange. Reynolds, Alcoa and Kaiser are leading US companies.

Delegations: Possibly & to 12 men in each delegation.

Duration: about one month

2. Changes in priorities of exchange proposals in OER memo of 27 September (reference a.).

Gas Industry -- from priority 1 to priority 2

Electronics & Telegraph Communications -- from priority 4 to priority 1

Accounting Techniques -- from priority 5 to priority 2

The priorities stated for the High Voltage and the Dams & Irrigation exchange proposals remain the same.

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Chief, Executive Staff
Economic Research

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R/MM 27 September 1967

### I. Exchanges Under Previous Agreement but Not Implemented

#### A. Ferrous Metallurgy

- 1. Subject: Smelting of ferrous metals, the production of hot and cold rolled metals, pipes, metal products, and production of heat-resisting alloys, including visits to scientific centers for study of scientific methods in the metallurgical industry and thermo-mechanical processing.
- 2. Value: An exchange of this type offers, in theory, considerable potential insofar as information of intelligence value is concerned, but, in practice, Soviet unwillingness to include certain key installations on the itinerary in the USSR has resulted in watered-down proposals of only marginal intelligence value. Most of the Soviet plants which the USSR has been willing to include in the itinerary have already been visited by qualified Western observers and, in addition, the Soviets publish considerable information on such plants and on ferrous metallurgy in general.
- 3. Proposed itineraries: The latest Soviet proposal is contained in the Soviet Aide-Memoire GKNT-23 dated 14 April 1967.
  - 4. Delegations: Each to be made up of 11 men.
  - 5. <u>Duration</u>: About 30 days for each visit.
  - 6. Priority: 3

### B. Aluminum Industry

- 1. Subject: Production of aluminum and its alloys, mechanization and automation of the electrolysis process, mining and processing of aluminous ores (bauxite, nepheline, and alumite) and manufacture of alumina.
- 25. Value: An exchange on aluminum could yield a net gain to the

  US

  From the intelligence
  standpoint, the current alumina supply problem in the USSR is of particular
  interest because of its relevance for our estimates of future growth of
  the Soviet aluminum industry. Recently the USSR has increased imports of
  bauxite and alumina because of the lag in its plans to obtain alumina from
  new non-bauxite raw materials, principally nepheline and alumite ores.

  Visits to appropriate facilities in the USSR (see item 3, below) could
  yield information about the current level of output at the two major alumina
  plants in the Urals (processing bauxite) and about prospects for the
  expansion of output at these established plants as well as at new plants
  in Kazakhstan (processing bauxite), Armenia (processing alumite ores), and
  in Siberia (processing nepheline ores).

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From the standpoint of the Soviets, they probably would be interested in organizational and operating measures employed by US companies for improvements in efficiency from the mining through the metal production stages, but they might have an even greater interest in US fabricating technology. The Soviets have devoted considerable attention to aluminum technology insofar as strategic applications (military and aerospace) are concerned, but have lagged in the development of capabilities for civilian applications. This also reflects the relatively weak effort compared to that in the US to promote new uses for aluminum, including those in construction, transport, packaging, and machine building.

3. Proposed itineraries: In the USSR — Aluminous raw material mining — Sevoural'sk, Sverdlovsk Oblast (bauxite), Zaglik, Azerbaijan SSR (alumite), and Uzhur, Krasnoyarsk Kray (nepheline; Alumina plants — Krasnotur'insk, Urals region (largest Soviet producer of alumina processing bauxite), Kirovabad, Azerbaijan SSR (new plant designed to process alumite but has encountered technical problems), Achinsk, Krasnoyarsk Kray (scheduled to be largest alumina producer in the USSR when completed; technical difficulties have delayed operations for four years at this plant which is to process nepheline ores. Possible alternative is the Pikalevo plant also processing nephelines, Pavlodar, Kasakh SSR (new plant processing bauxite); Reduction plants — Bogoslovskiy, Volgograd, Bratsk,

- 3 -

Krasnoyarsk, Kanaker, and Nadvoitsy; Institutes - All-Union Aluminum-Magnesium Institute.

In the US - Appropriate facilities of US companies depending on their interest in participating in exchange; Reynolds, Alcoa, and Kaiser are leading US companies.

- 4. Delegations: Possibly 8 to 12 men in each delegation.
- 5. Duration: About 1 month.
- 6. Priority: 1